COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

RECEIVED
SEP 17 2003
PUBLIC SERVICE COMMISSION

In the Matter of:

MATRIX ENERGY, LLC	)	
FOR DETERMINATION OF	)	CASE NO. 2003-00228
RETAIL ELECTRIC SUPPLIER	)	

TESTIMONY OF PAUL HORN

****

1. What is you name and business address?

Answer: My name is Paul Horn, and my business address is Beech Fork Processing, Inc., P.O. Box 190, Lovely, Kentucky, 41231.

2. What is you educational background?

Answer: I received a Bachelor of Science Degree in Mining Engineering from the University of Kentucky College of Engineering in 1994 and have obtained my Professional Engineering License.

3. Where are you employed and what is you job title and duties?

Answer: I am employed by Beech Fork Processing, Inc. (Hereinafter referred to as "Beech Fork"), as the Manager of Engineering. My duties include the review and identification of coal reserves and the permitting of the coal reserves. My duties also include overseeing the operation of the mine, including the manner in which power is supplied to the mine site. I am also involved in planning of how the mining is to be performed, obtaining the proper permits and ensuring the payment of royalties. I perform these duties for Beech Fork and for its affiliated

companies, such as Matrix Energy, LLC (hereinafter referred to as "Matrix") and Czar Coal Corporation, (hereinafter referred to as "Czar").

4. Are you familiar with Matrix and how are you familiar with Matrix?

Answer: I am familiar with Matrix because it is affiliated with Beech Fork in that it is owned by the same individuals that own Beech Fork, James H. Booth and Ted McGinnis. Matrix is the contract mining company that was formed in order to mine the Alma coal reserves leased by Czar located in Martin and Johnson Counties, Kentucky. I have been assigned to work on the Matrix project, and have worked with Matrix in constructing the slope entrance to the mine, constructing the ventilation shaft, obtaining power to the mine, and addressing other issues relating to the opening of the Matrix mine.

5. Please describe the relationship between Matrix, Beech Fork and Czar.

Answer: Beech Fork, Matrix and Czar are affiliated companies that are owned by James H. Booth and Ted McGinnis. Czar leases the coal reserves that are to be mined by contract with Matrix. Beech Fork performed the initial work on the development of the mine to be operated by Matrix prior to the formation of Matrix. The permit to mine the Alma reserves was issued to Czar and Czar entered into a contract with Matrix to perform the actual mining operation. Beech Fork provides the engineering services to Matrix and Czar and its other affiliates.

6. Please describe the coal reserves leased by Czar that are to be mined by Matrix and where these coal reserves are located.

Answer: The Alma coal seam to be mined by Matrix is between 400 and 1,000 feet below ground surface. The mineable coal seam is between 30 and 54 inches thick, and contains approximately 50 millions tons of coal, in place. The Czar mining site containing the Alma coal

seam is located in Martin and Johnson Counties, Kentucky. A map reflecting the location of the mineable portion of the Alma coal seam is attached hereto as Exhibit A. Czar already has the mining rights to mine all of these reserves, and Matrix, as the contract miner, has the right to mine them.

7. Please describe the percentage of the Alma coal seam, both permitted and unpermitted, that is to be mined by Matrix that is located in the service territory of Kentucky Power Company d/b/a American Electric Power (hereinafter referred to as "AEP") and the percentage of the Alma coal seam, both permitted and unpermitted, that is mineable that is located in the service territory of Big Sandy Rural Electric Cooperative Corporation (hereinafter referred to as "Big Sandy").

Answer: Seventy-Five (75 %) of the total mineable coal reserves in the Alma coal seam to be mined by Matrix are located in the service territory of AEP and Seventy-Six (76%) of the total permitted mineable coal reserves of the Alma coal seam are located in the service territory of AEP. Twenty-Five (25%) of the total mineable coal reserves in the Alma coal seam to be mined by Matrix are located in the service territory of Big Sandy and Twenty-Four (24%) of the total permitted mineable coal reserves of the Alma coal seam are located in the service territory of Big Sandy. Exhibit A reflects the location of the reserves permitted for mining by the Kentucky Natural Resources and Environmental Protection Cabinet, as well as the unpermitted reserves.

8. Why has a permit been obtained to mine only a portion of the coal reserves?

Answer: The boundary of the coal reserves was still being determined during the permitting process. Additionally, the industry practice is to obtain a permit for only the coal reserves that are to be mined within the next 3-5 years.

9. Does Matrix intend to mine all of the coal in the reserves reflected on Exhibit A?

Answer: Yes. Matrix intends to mine all of the coal reserves at the Czar mine site and will obtain the necessary permit to do so. All of these reserves are considered to be part of the Matrix mine. The mine would not be economically feasible if only the currently permitted reserves were to be mined.

10. Will the Matrix mine have more than one entrance?

Answer: No. All of the coal will be mined using the entrance in Johnson County.

11. Have any coal seams on the Czar mine site ever been previously mined and who provided power for these previous mining operations?

Answer: Yes. The six coal seams that have been previously mined by other unrelated and related companies operating on what is now referred to as the Czar mine site are the 5 Block coal seam, the Clarion coal seam, the Stockton coal seam, the Coalburg coal seam, the Haddix coal seam and the Taylor coal seam. These coal seams were located at shallower depths than the Alma coal seam to be mined by Matrix. AEP provided the electric power for the mining of these coal seams.

12. Has Big Sandy previously provided electric power for the mining conducted on or under the property now known as the Czar mining site?

Answer: No. AEP provided the electric power for the mining previously conducted on this site.

13. Where is the mine entrance for the coal mine to be operated by Matrix?

Answer: The mine entrance is located in Johnson County, Kentucky, and is in the service territory of Big Sandy. The mine entrance is located 1,490 feet from the service territory of AEP. The location of the mine entrance is reflected on the Map attached as Exhibit A.

14. Please describe the steps taken by Matrix to obtain electric service to the mine to be operated by Matrix.

Answer: Because the entrance for this mine is located in Big Sandy's service territory and Ted McGinnis and I were unaware of KRS 278.017(3), we initially thought that the mine would have to be served by Big Sandy. Therefore, prior to beginning construction of the mine entrance, Ted McGinnis and I met with representatives of Big Sandy, David Estepp, Bruce Davis and David Robinson, in January of 2002. The meeting was held in Big Sandy's office in Paintsville, Kentucky. Gregg McKinney of East Kentucky Power (Hereinafter referred to as "EKP") was also present at this meeting. During this meeting, Big Sandy was advised that a mine entrance was to be constructed on Czar's property and electric service needed to be provided to this mine entrance by April of 2002 for construction purposes. Also, at this meeting Big Sandy was advised that actual mine production power would be needed in one year from April of 2002. Big Sandy was also advised of the magnitude of the electrical requirements for the mine and the location of the mine entrance.

Big Sandy stated in the meeting that its capacity was full and that it did not have the capacity to service any new load in this area. This lack of capacity is evidenced by the letter dated September 6, 2001, forwarded by Big Sandy to AEP allowing AEP to provide temporary power during construction. See attached Exhibit C. A copy of the map that was shown to the Big Sandy representatives is attached as Exhibit B. Big Sandy's representatives indicated that it would take approximately one year for Big Sandy to provide electric service to the mine entrance and indicated that Beech Fork could get temporary power from the Czar mine site, which was being served by AEP, to start the development of the slope entrance and ventilation shaft to the

mine, which would take approximately one year. Big Sandy indicated that it would have to determine if it would obtain power from the AEP transmission lines on the Czar mining site or from EKP's transmission line near the Thunder Ridge race track. The race track is approximately four miles from the mine site.

15. Did Big Sandy ever provide permission for AEP to provide the power necessary to construct the entrance to the Matrix mine?

Answer: Yes. During the January 2002 meeting with representatives of Big Sandy and EKP, verbal authorization was given to representatives of Beech Fork to extend the AEP power line to the proposed mine entrance because of the one year delay in providing power and the lack of capacity of Big Sandy's current infrastruture. Furthermore, Exhibit C is believed to be a letter from Big Sandy authorizing Beech Fork to obtain power from AEP to build the entrance to the Matrix mine. At the very least, this letter confirms that Big Sandy did not have the ability to provide power to the Matrix mine site for construction purposes. Big Sandy now states that this letter does not pertain to the supply of power to the entrance to the Matrix mine, but addresses the supply of power to a different mine.

16. When did Matrix start building the entrance to the mine?

Answer: The construction of the slope entrance by Matrix began on November 11, 2002. Air operated hand held drills were used to drill holes for the explosives and after detonation, air powered muckers were used to remove the debris. The air power was supplied by two electric 200 horse power air compressors. The 400 hundred horse power hoist used to remove the debris from the mine was placed in operation on November 21, 2002. The second shift of this operation was placed into operation on December 30, 2002. Thereafter, the operation continued for 20

hours a day, 7 days a week, with the exception of an approximately two week period due to equipment breakdowns. The construction of the ventilation shaft began in February of 2003. However, a diesel powered crane and diesel powered air compressors were used to dig the first 100 feet of the ventilation shaft. Thereafter, beginning on April 21, 2003, the same process that was used to dig the slope mine was also used to construct the ventilation shaft. Again, two electric 200 horse power air compressors were used to provide the air to the air tools. The 350 horse power hoist used to remove the debris from the ventilation shaft was placed in operation on May 2, 2003. The second shift of this operation was placed into operation on May 5, 2003. A 50 horse power fan was located at both the entrance to the slope mine and the ventilation shaft. Electric power was also provided to the small office trailers located at both the slope mine entrance and the entrance to the ventilation shaft.

17. Where did Matrix obtain the electric power to operate the equipment necessary to build the entrance to the mine and the ventilation shaft?

Answer: AEP currently provides electricity to the Czar mine site from its 69 kv transmission line. Also, its 138 kv transmission line crosses the Czar mine site. Pursuant to the verbal and written authorization provided by Big Sandy, one of the power lines to the Czar mine site was extended to the mouth of the Matrix mine. A map reflecting the extension of the power line from the Czar mine site to the Matrix mine entrance and the AEP 69 kv and 138 kv lines crossing the Czar mine site is attached as Exhibit A.

18. What is the status of Matrix's discussions with Big Sandy for supplying electricity to the Matrix mine site?

Answer: During the initial discussions with the representatives of Big Sandy, Matrix was

advised that Big Sandy could provide power to the mine site by requesting EKP to tap into the AEP transmission lines crossing the Czar mine site. EKP would then construct a supply line to a Big Sandy 12,470 volt substation to a point above the Matrix mine. Since that time, Big Sandy has also suggested that the 12,470 volt substation be built adjacent to AEP's 69 kv line, and Matrix would then build the approximately 1.6 mile line from the substation to the mouth of the mine. Matrix is concerned that it will experience approximately a ten percent (10 %) loss in power to the mouth of the mine due to the 1.6 mile length of the line to the mouth of the mine. This loss in power, in conjunction with the power loss as the electric lines are extended underground may endanger the electric motors used by Matrix in the mine. AEP has indicated that it will construct a substation adjacent to the 69 kv transmission line, supply 34.5 kv from this substation to a 12,470 volt substation built at the mouth of the mine. This will help to avoid the loss of power and the potential damage to the electric motors used by Matrix. AEP has also offered to allow Matrix the option of constructing the line from the 34.5 kv substation to a 12,470 volt substation at the mouth of the mine, as well as building these two substations.

19. Where is the coal preparation plant for the Matrix mine and where is it located?

Answer: The coal preparation plant for the Matrix coal mine is located on the Czar mining site and the power to the coal preparation plant is provided by AEP. The coal will initially be transported from the coal stockpile area by truck, and after approximately one-half to one year, a series of three (3) connected conveyor belts, with a total length of approximately 13,050 feet, will be used to transport the coal to the Czar preparation plant. Of these three (3) connected belts, only the first belt will be supplied with power by a motor located in Big Sandy's territory. The remaining two belts will be supplied with power from motors located in AEP's territory. These

two belts are approximately 11,734 feet long.

20. What type of equipment will be used in the Matrix mine and what is one of the primary causes of damage to this equipment.

Answer: All of the equipment operated by Matrix in the mine will have to be electric powered. Matrix will operate continuous miners (995 volts), shuttle cars (480 volts), roof bolters (480 volts), feeders (480 volts), belt drive (480 volts), and a scoop, battery operated, which is charged by 480 volts. The primary cause of damage to this equipment is reductions or surges in electric power. The need to provide consistent reliable power to the mine is the reason that Matrix needs the 12,470 volt substation to be built at the mouth of the mine.

21. What are the estimated power demands for the Matrix mine and the cost of the power over the life of the project.

Answer: Matrix estimates that it will require approximately 3,000 kw to be supplied to the Matrix mine per month. This will supply power to the mine surface infrastructure and the mining equipment for two sections of the mine. Only two sections of the mine were considered in the cost calculations because the boreholes are planned to be located in AEP's territory and therefore, served by AEP. The calculations are as follows:

Big Sandy's charge:
Demand cost: $5.39 x 3,000 kw = $16,170.00
Energy Charge: 1,275,000 kwh x $0.0277 = $35,317.50
Fuel Cost Adjustment: 1,275,000 kwh x $0.00627 = $7,994.25
Service Charge: $150.00
Total cost per month: $59,631.75

AEP's charge:
Demand Cost: $8.51 x 3,000 kw = $25,530.00
Energy Charge: 1,203,120 kwh x 0.01171 = $14,088.53 (No minium kwh in tariff)

Fuel Cost: $488.59
Environmental Adjustment:$902.67
Service Charge: $662.00
Total Cost per Month: $41,671.79

Based on these calculations, the use of AEP will provide cost savings of $17,959.96 per month, and a cost savings of $214,519.52 per year. Assuming a seven (7) year timeline the cost saving recognized by Matrix will be $17,996 x 12 = $215,519.52 per year x 7 years = $1,508,636.64. This calculation assumes that Big Sandy will only serve two sections of the Matrix mine, which will be completed within seven (7) years, and AEP will serve the remaining two sections of the Matrix mine through the boreholes. If the entire project is served by Big Sandy, the cost would be based on four (4) sections, and Big Sandy's cost would be approximately six million ($6,000,000.00) more than AEP's cost over the life of the Matrix mine.

22. Will the Matrix mine have any boreholes down into the mine and what are these boreholes used for?

Answer: Matrix plans to install three boreholes into the Matrix mine. All three boreholes will be in territory served by AEP, and will be used to allow power lines to be fed down to the mine to provide power to the equipment operating at large distances from the mine entrance. This will eliminate the power loss that would otherwise occur. Since these boreholes are in AEP's territory, AEP will provide the power to the electric line in each of the boreholes. The planned location of the three boreholes are reflected on the map attached as Exhibit A.

23. What safety benefits will be realized if AEP provides power to the Matrix mine?.

Answer: By having AEP provide power to the mine, if there is a blackout or brownout condition, Matrix will know to contact only one electric company to discover the reason for the

blackout or brownout condition and will not have to wait for Big Sandy to contact EKP, and then for EKP to contact AEP to inform it of the problem, determine the cause of the problem and to solve the problem. Furthermore, there will not be more than one company providing power to the mine, which would be the case if AEP provides the power though the boreholes and Big Sandy provided the power through the mine entrance. A single service provider is an important safety factor because when power to the mine fails, there is never any doubt about whether certain equipment is energized. This is a very serious concern because part of the mine could be energized and part of the mine not be energized, thus, someone may mistakenly think the entire mine is without electricity and come into contact with an energized line.

24. Will there be a duplication of lines and facilities if Big Sandy provides the service to the Matrix mine.

Answer: Yes. If AEP is allowed to serve the Matrix mine, a 34.5 kv line will be run from the substation adjacent to the 69 kv transmission line to the entrance of the mine. As the mine is developed, the electric lines for the three boreholes, which are located in AEP territory, could be run off of the AEP 34.5 kv line. However, if Big Sandy provides 34.5 kv service to the mine entrance through EKP, this 34.5 kv line would not be allowed to be run to the three boreholes in AEP's territory. Therefore, an additional substation adjacent to the 69 kv transmission line or the 138 kv transmission line would have to be installed and a power line run from this new substation to the three boreholes. Furthermore, if Big Sandy provides service to the mine, then Big Sandy, EKP and AEP would be involved instead of just AEP.

25. How soon could AEP provide electric service to the mouth of the Matrix mine at 34.5 kv?

Answer: AEP indicated that the service to the mine entrance could be provided in approximately six (6) months.

26. Has Matrix been provided with a written service proposal by Big Sandy?

Answer: No. Nor did Big Sandy ever provide Matrix with its rates.

27. Does this conclude your testimony?

Answer: Yes.

_____
Paul Horn

STATE OF KENTUCKY

COUNTY OF _____

SUBSCRIBED AND SWORN to and acknowledged before me by Paul Horn, this the _____ day of September, 2003.

My Commission expires: _____.

_____
NOTARY PUBLIC

Robert C. Moore
HAZELRIGG & COX, LLP
415 West Main Street, 1st Floor
P. O. Box 676
Frankfort, Kentucky 40602-0676

Answer: No. Nor did Big Sandy ever provide Matrix with its rates.

27. Does this conclude your testimony?

Answer: Yes.

Paul Horn

STATE OF KENTUCKY

COUNTY OF Johnson

SUBSCRIBED AND SWORN to and acknowledged before me by Paul Horn, this the 16 day of September, 2003.

My Commission expires: 1/04/2007.

NOTARY PUBLIC

Robert C. Moore
HAZELRIGG & COX, LLP
415 West Main Street, 1st Floor
P. O. Box 676
Frankfort, Kentucky 40602-0676
(502) 227-2271

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing has been served upon Bruce

(502) 227-2271

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing has been served upon Mark R. Overstreet, Esq., Stites & Harbison, PLLC , 421 West Main Street, P. O. Box 634, Frankfort, Kentucky 40602-0634, Counsel for American Electric Power; Albert A. Burchett, P. O. Box 0346, Prestonsburg, Kentucky 41653, counsel for Big Sandy RECC, by placing same in the U.S. Mail, postage pre-paid, this the 16th day of September, 2003.

Robert C. Moore